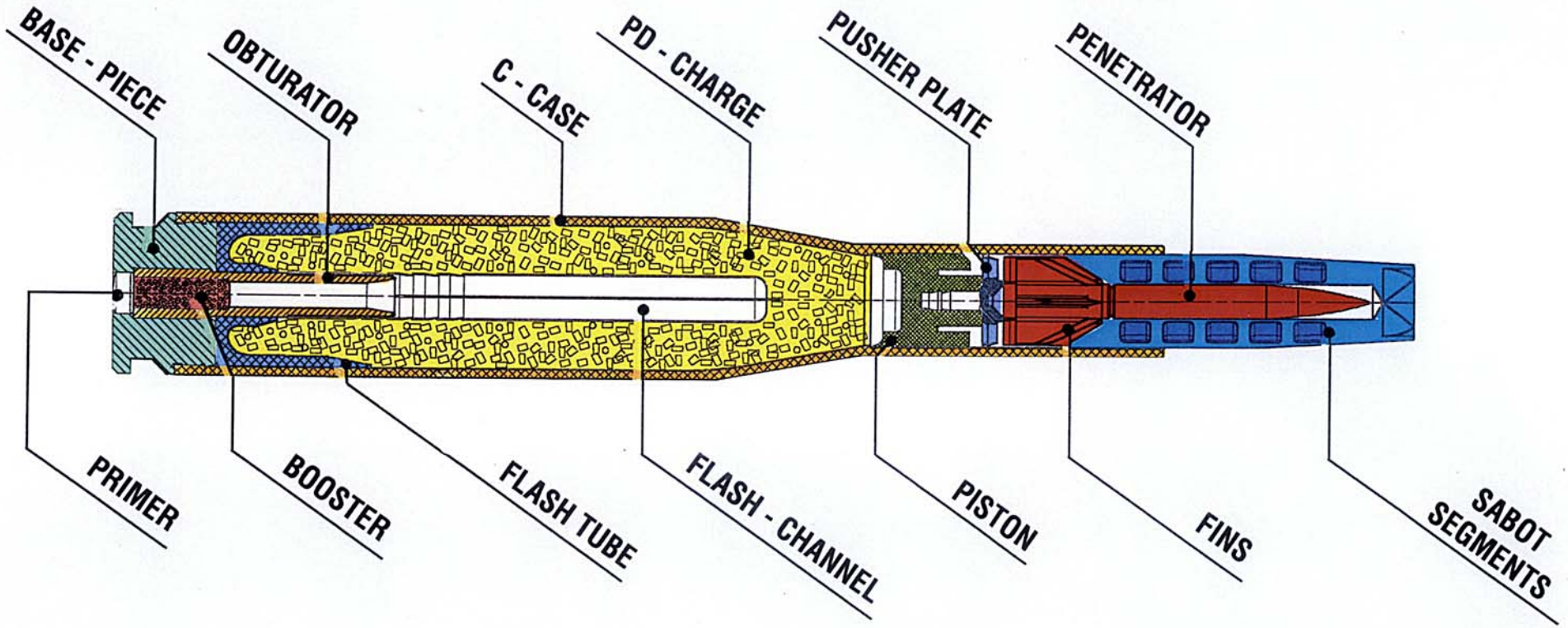
# THE 15,2 mm APFSDS - ROUND

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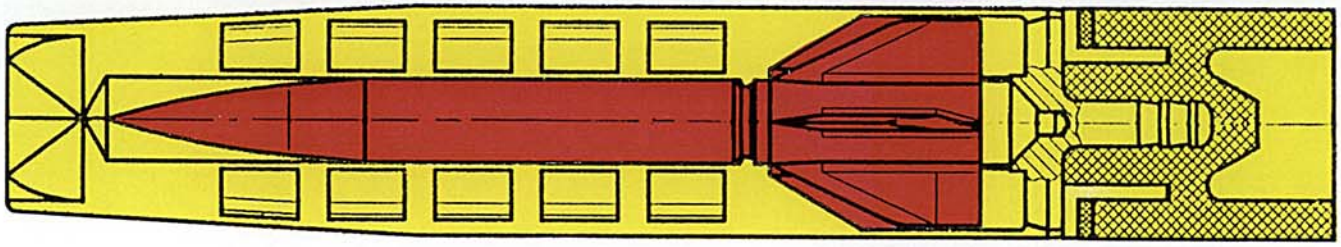
# DESCRIPTION OF THE PENETRATOR
# 15,2 mm / .60 APFSDS - CARTRIDGE



## ADVANTAGES OF THE PROJECTILE :

- ❑ FLAT TRAJECTORY
- ❑ LOW VELOCITY DRAG
- ❑ HIGH TARGET VELOCITY / ENERGY
- ❑ HIGH PENETRATION CAPABILITY

- ■ ADVANCED PRODUCEABILITY
- ■ LOW RISK OF BREAKAGE
- ■ SYNTHETIC FINS
- ■ METAL PUSHER PLATE
- ■ 4 - SYNTHETIC SABOT SEGMENTS

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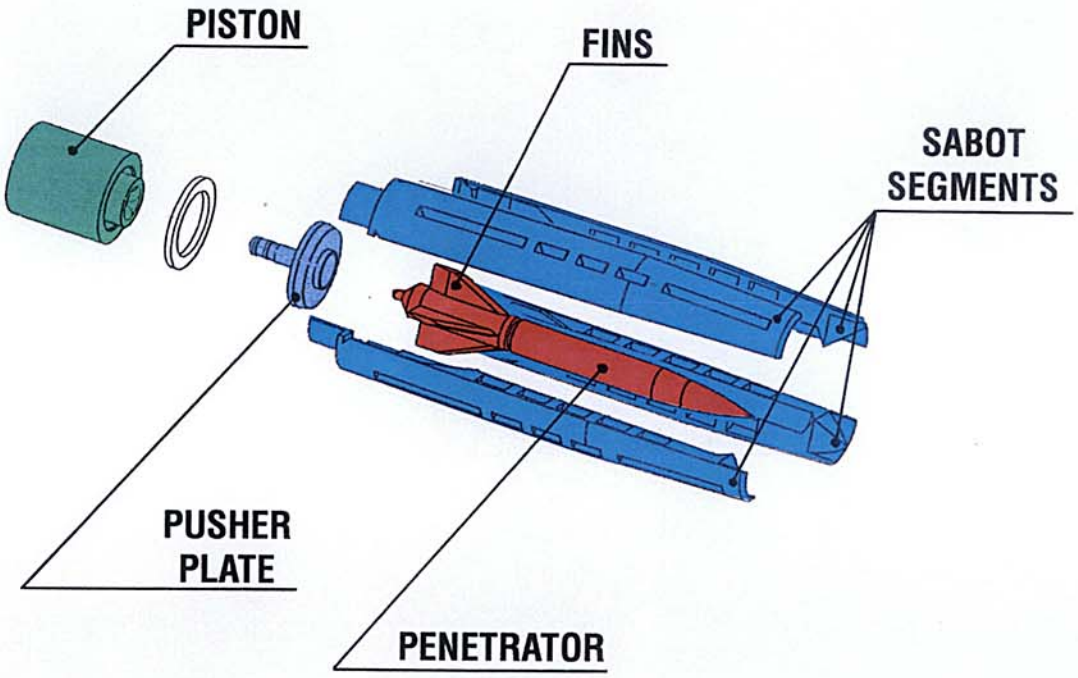
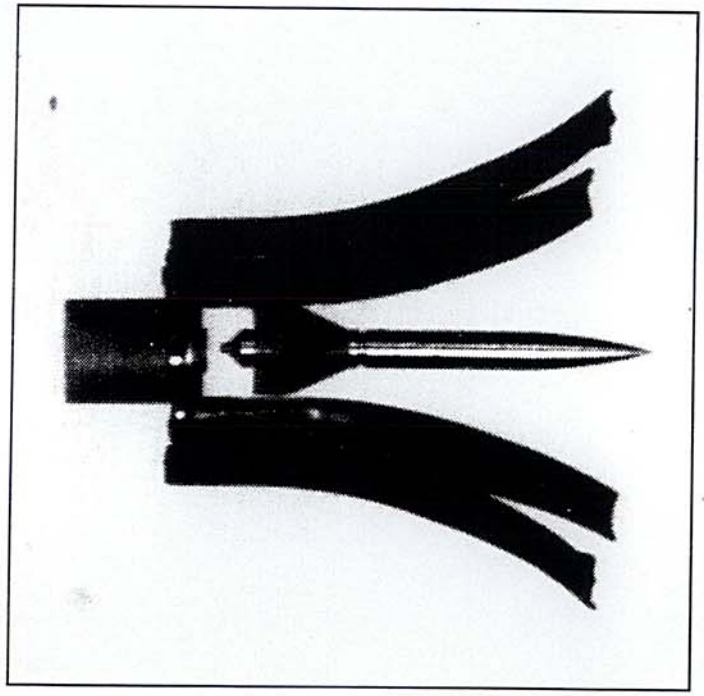
# DESCRIPTION OF THE PENETRATOR
# 15,2 mm APFSDS



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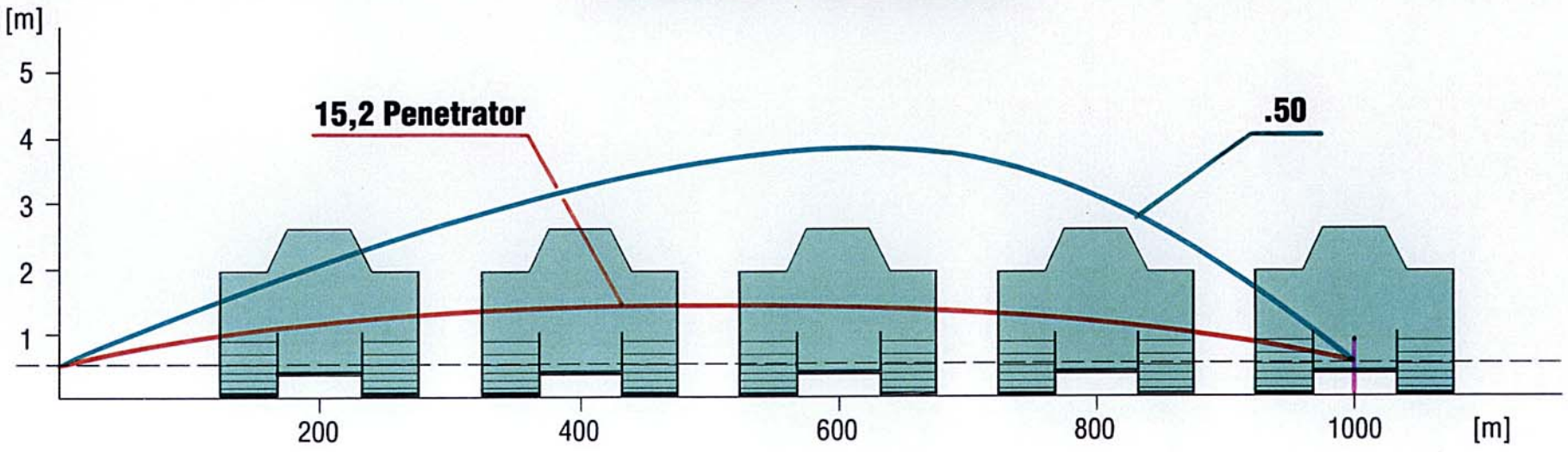
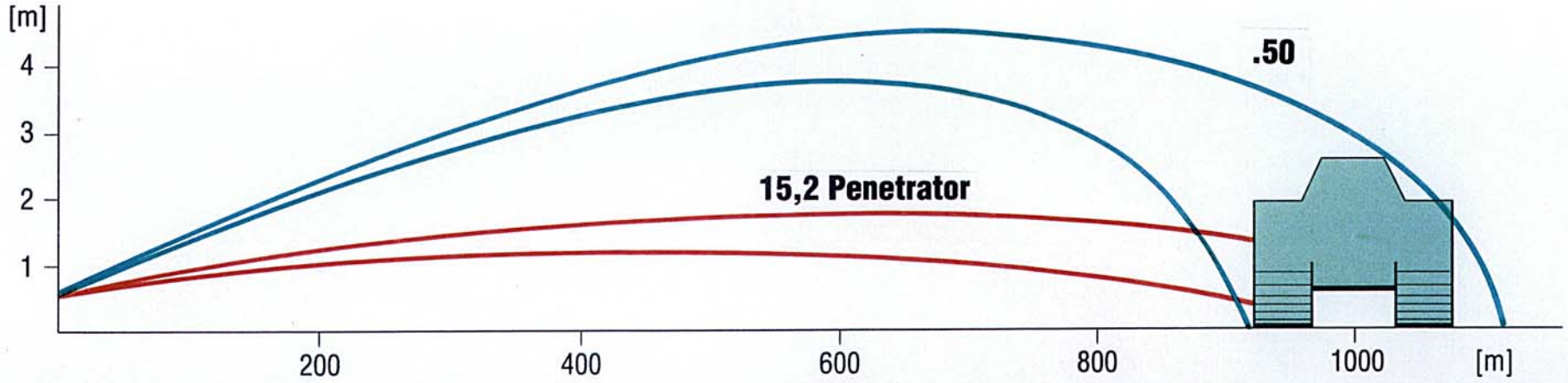
## TRAJECTORY COMPARISON




## "CONE OF FIRE"

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# COMPARISON OF WEAPON SIZES

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# IWS 2000
## AMR

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# IWS 2000
## AMR

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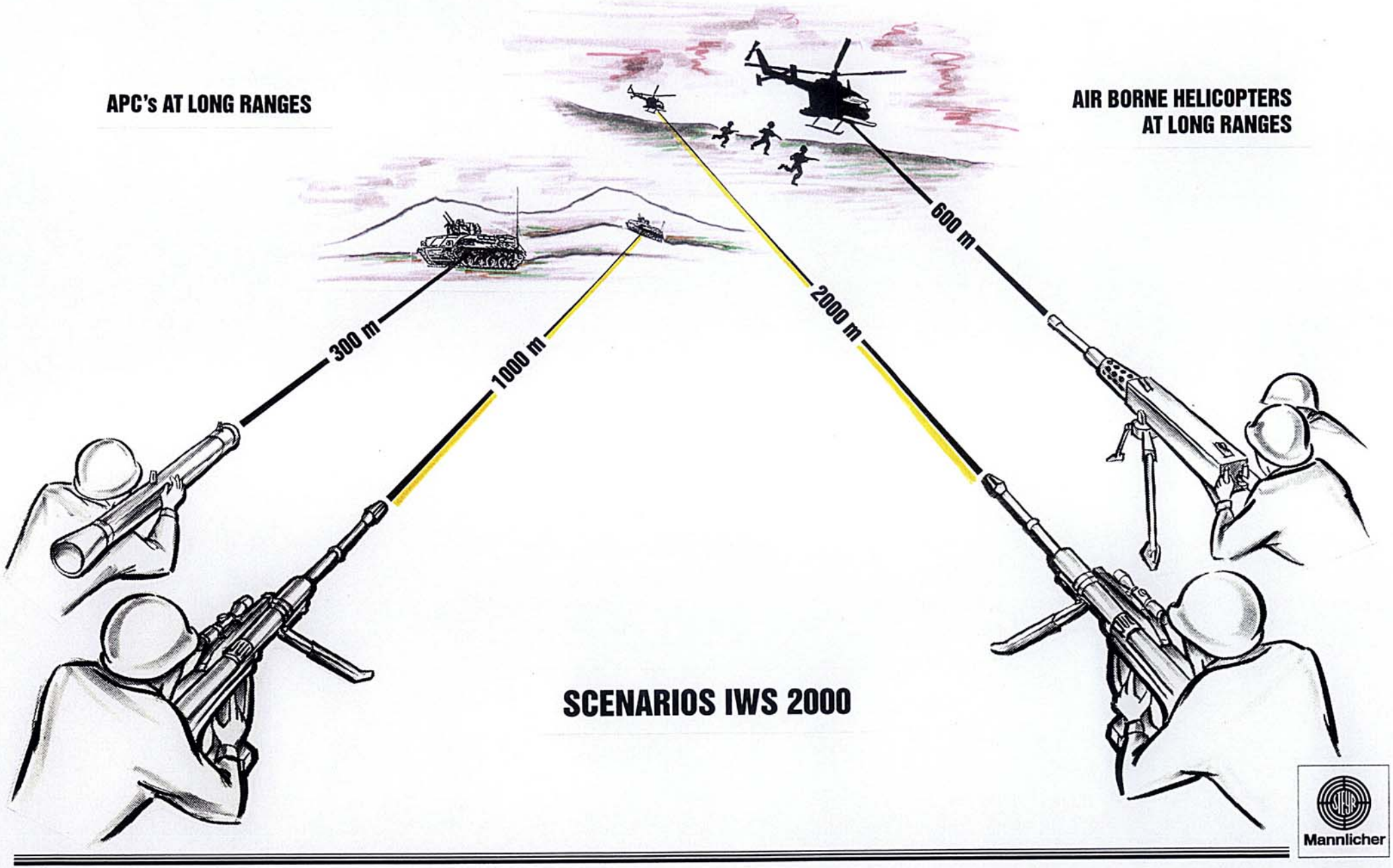

APC's AT LONG RANGES
AIR BORNE HELICOPTERS
AT LONG RANGES
300 m
1000 m
2000 m
600 m
SCENARIOS IWS 2000
Mannlicher

PETROL CARRIERS
SUPPLY TRUCKS

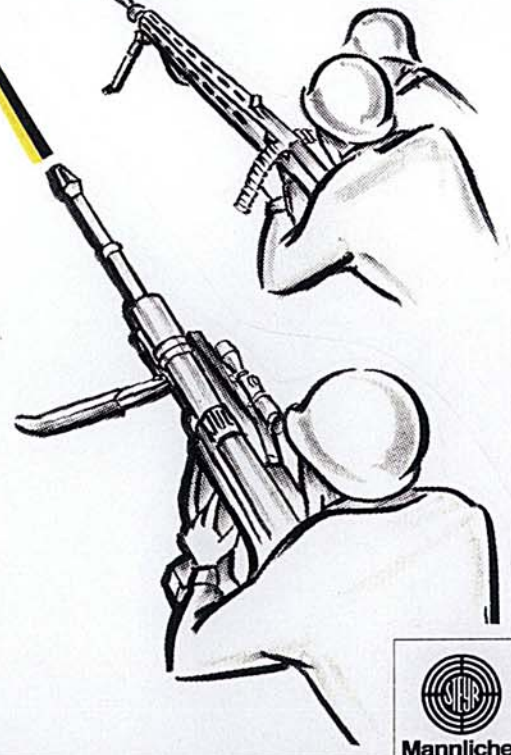
RADAR STATIONS
COMMAND SHELTERS

800 m

1500 m

800 m

1500 m



## SCENARIOS IWS 2000

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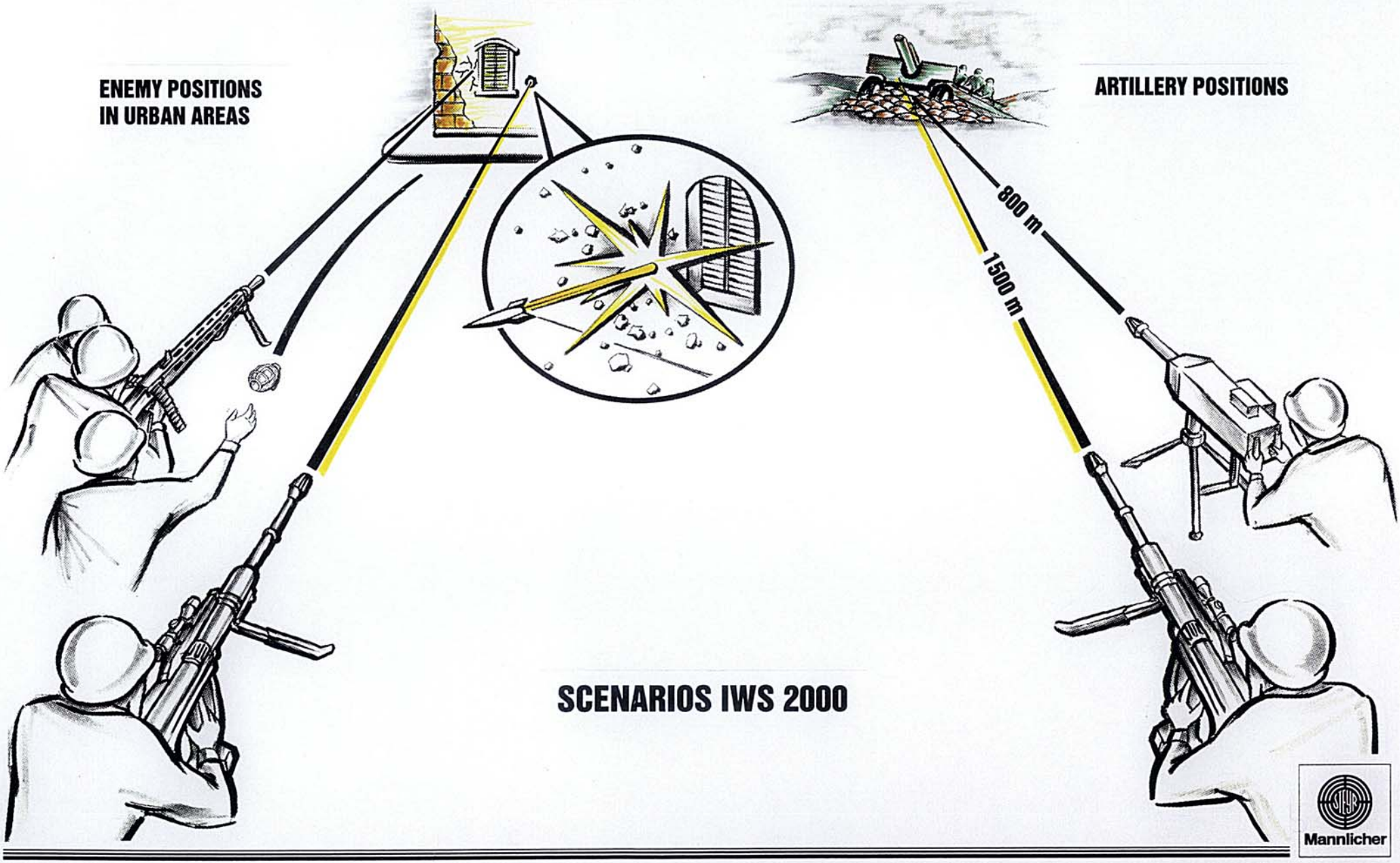
ENEMY POSITIONS
IN URBAN AREAS
ARTILLERY POSITIONS
800 m
1500 m
SCENARIOS IWS 2000
Mannlicher

# WEAPONS / SYSTEMS AND REQUIRED CREWS

# "INFANTRY WEAPON SYSTEM 2000"

## TECHNICAL DATA :

| | |
|---|---|
| OVERALL LENGTH | : 1800 mm |
| TOTAL WEIGHT (two carrying loads) | : 18 kg |

## FUNCTIONAL PRINCIPLE :

SINGLE SHOT RIFLE WITH LONG RECOIL SYSTEM

## DESIGN - PROPOSAL

### 5-SHOT - ANTI - MATERIAL - RIFLE

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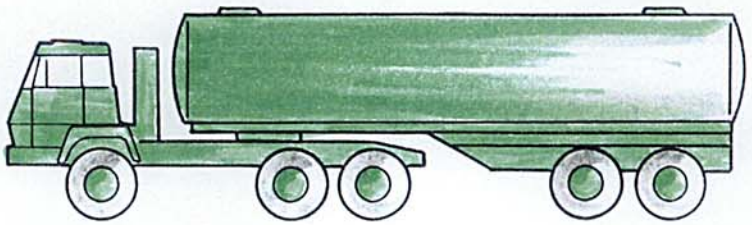
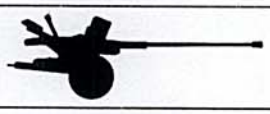
# TARGET : PETROL CARRIER / SUPPLY TRUCK

**1500 m / in motion**



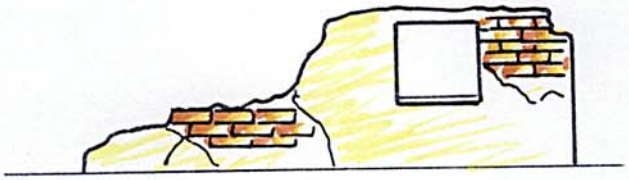
| WEAPON | IMMEDIATE AVAILABILITY for Infantry | LONG RANGE CAPABILITY | EFFECT ON TARGET | LOW WEIGHT / MOBILITY |
|---|---|---|---|---|
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✗ | ✗ | ✓ |
| BALL | ✓ | ✓ | ✓ | ✗ |
| SLAP | ✓ | ✓ | ✓ | ✗ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✗ | ✓ | ✓ | ✗ |
|  | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ | ✓ |

# TARGET : RADAR STATION / COMMAND SHELTER

**2000 m / stationary**

| WEAPON | IMMEDIATE AVAILABILITY for Infantry | LONG RANGE CAPABILITY | EFFECT ON TARGET | LOW WEIGHT / MOBILITY |
|---|---|---|---|---|
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✗ | ✗ | ✓ |
| BALL | ✓ | ✓ | ✓ | ✗ |
| SLAP | ✓ | ✓ | ✓ | ✗ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ | ✓ |

# TARGET : COVERED ENEMY POSITION INSIDE OF BUILDING



| WEAPON | IMMEDIATE AVAILABILITY for Infantry | LONG RANGE CAPABILITY | EFFECT ON TARGET | LOW WEIGHT / MOBILITY |
|---|---|---|---|---|
| | ✔ | ✔ | ✘ | ✔ |
| | ✔ | ✔ | ✘ | ✔ |
| | ✔ | ✔ | ✘ | ✔ |
| BALL | ✔ | ✔ | ✔ | ✘ |
| SLAP | ✔ | ✔ | ✔ | ✘ |
| | ✔ | ✔ | ✔ | ✔ |
| | ✔ | ✔ | ✔ | ✔ |
| | ✘ | ✔ | ✔ | ✘ |
| | ✘ | ✔ | ✔ | ✘ |
| | ✘ | ✔ | ✔ | ✔ |
| | ✔ | ✔ | ✔ | ✔ |

# MODERN BATTLEFIELD SCENARIOS / THREATS FOR THE INFANTRY

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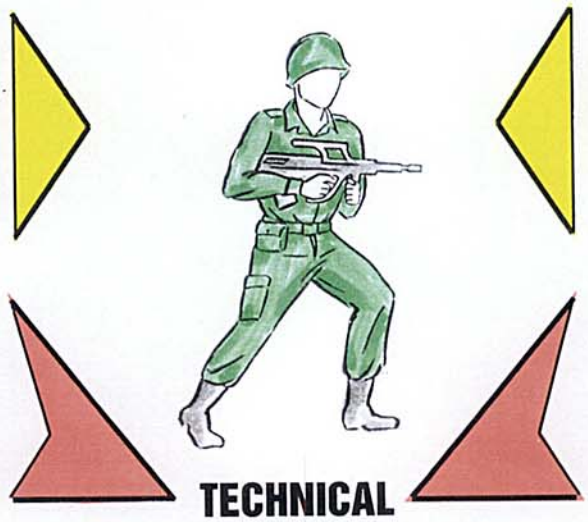
# THE PRESENT "CRITERIA - MISMATCH"

**Light Infantry must be capable to fight modern enemy targets. Therefor a weapon is required that offers :**

- Long range capability
- Advanced target effect and penetration
- Immediate availability
- Low weight / high mobility



**Cost- and Logistic aspects**

- Purchase costs
- Costs of system (life cycle)
- Ammunition costs
- Cost effectiveness

**TECHNICAL SOLUTION**

# IWS 2000

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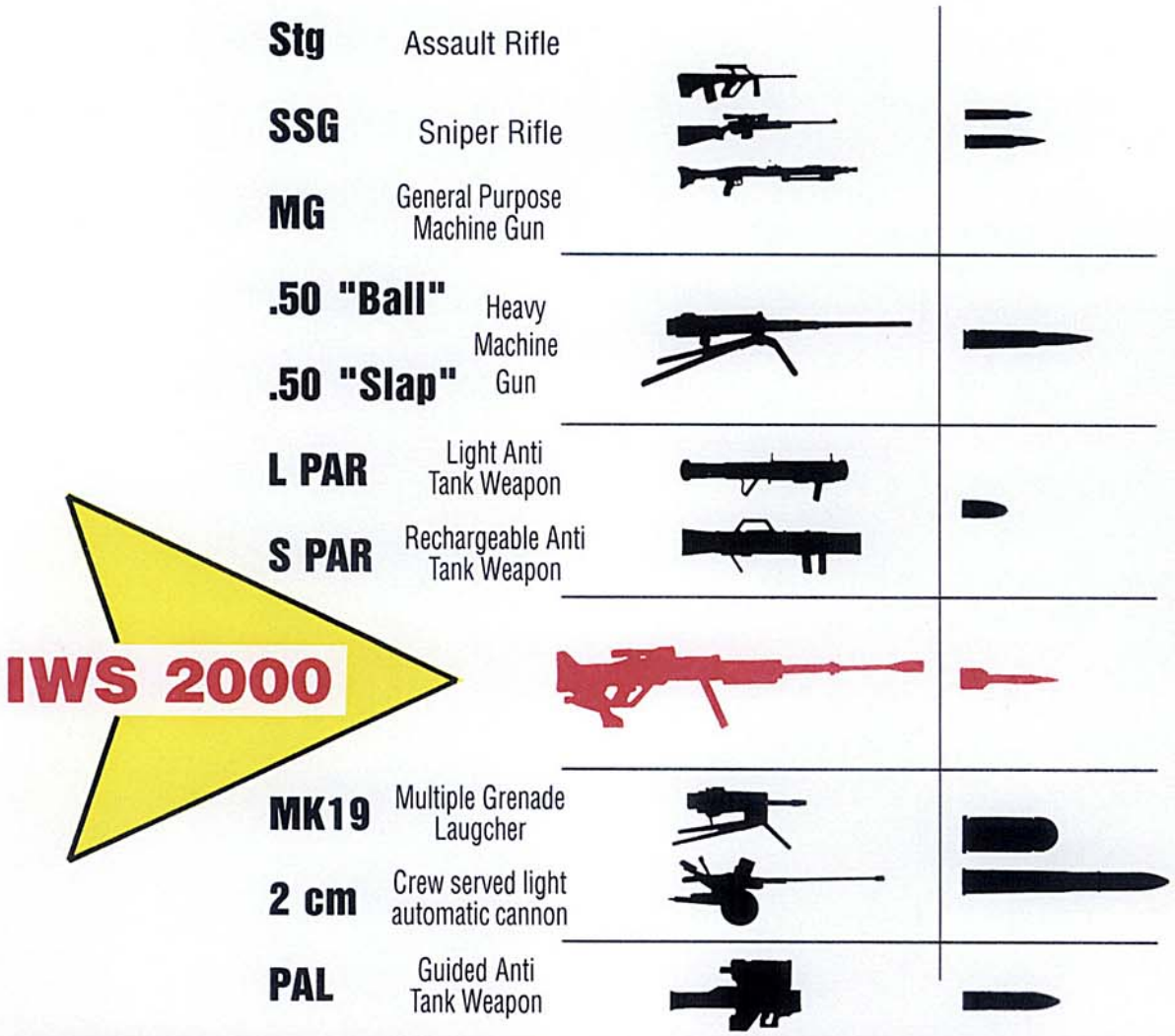
# INFANTRY RESPONSE



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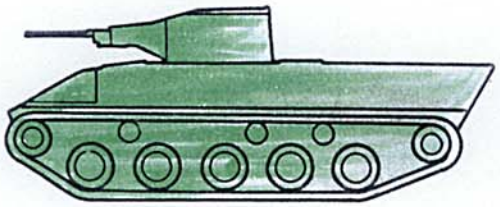
# TARGET : APC

**1000 m**



| WEAPON | IMMEDIATE AVAILABILITY for Infantry | LONG RANGE CAPABILITY | EFFECT ON TARGET | LOW WEIGHT / MOBILITY |
|---|---|---|---|---|
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✓ | ✗ | ✓ |
| | ✓ | ✓ | ✗ | ✓ |
| BALL | ✓ | ✓ | ✗ | ✗ |
| SLAP | ✓ | ✓ | ✓ | ✗ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ | ✓ |

# TARGET : AIR BORNE HELICOPTER

**2000 m / landing**

| WEAPON | IMMEDIATE AVAILABILITY for Infantry | LONG RANGE CAPABILITY | EFFECT ON TARGET | LOW WEIGHT / MOBILITY |
|---|---|---|---|---|
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✗ | ✗ | ✓ |
| BALL | ✓ | ✓ | ✓ | ✗ |
| SLAP | ✓ | ✓ | ✓ | ✗ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ | ✓ |

# COMPARISON - PENETRATOR

| PENETRATOR | .50 Ball | .50 Slap | .50 Flechette | 15,2 Penetrator |
|---|---|---|---|---|
| PROJECTILE WEIGHT | 42 g | 27 g | 12 g | 19,5 g |
| DIAMETER | 12,7 mm | 7,7 mm | 4 mm | 5,5 mm |
| SECTIONAL DENSITY | 0,316 g/mm² | 0,58 g/mm² | 0,95 g/mm² | 0,82 g/mm² |
| MATERIAL | Pb / Steel | Wo - Alloy | Wo - Alloy | Wo - Alloy |
| OTHER | Solid VM<br>stabil by twist | APDS<br>stabil by twist | APFSDS<br>FIN - stab. | APFSDS<br>FIN - stab. |

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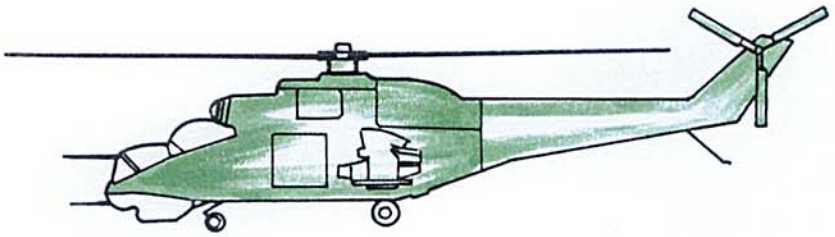
# TARGET : ARMOURED COMBAT HELICOPTER

**1000 m**



| WEAPON | IMMEDIATE AVAILABILITY for Infantry | LONG RANGE CAPABILITY | EFFECT ON TARGET | LOW WEIGHT / MOBILITY |
|---|---|---|---|---|
| | ✓ | ✗ | ✗ | ✓ |
| | ✓ | ✓ | ✗ | ✓ |
| | ✓ | ✓ | ✗ | ✓ |
| BALL | ✓ | ✓ | ✗ | ✗ |
| SLAP | ✓ | ✓ | ✓ | ✗ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✓ | ✗ | ✓ | ✓ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✗ |
| | ✗ | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ | ✓ |

# IWS 2000 AMR

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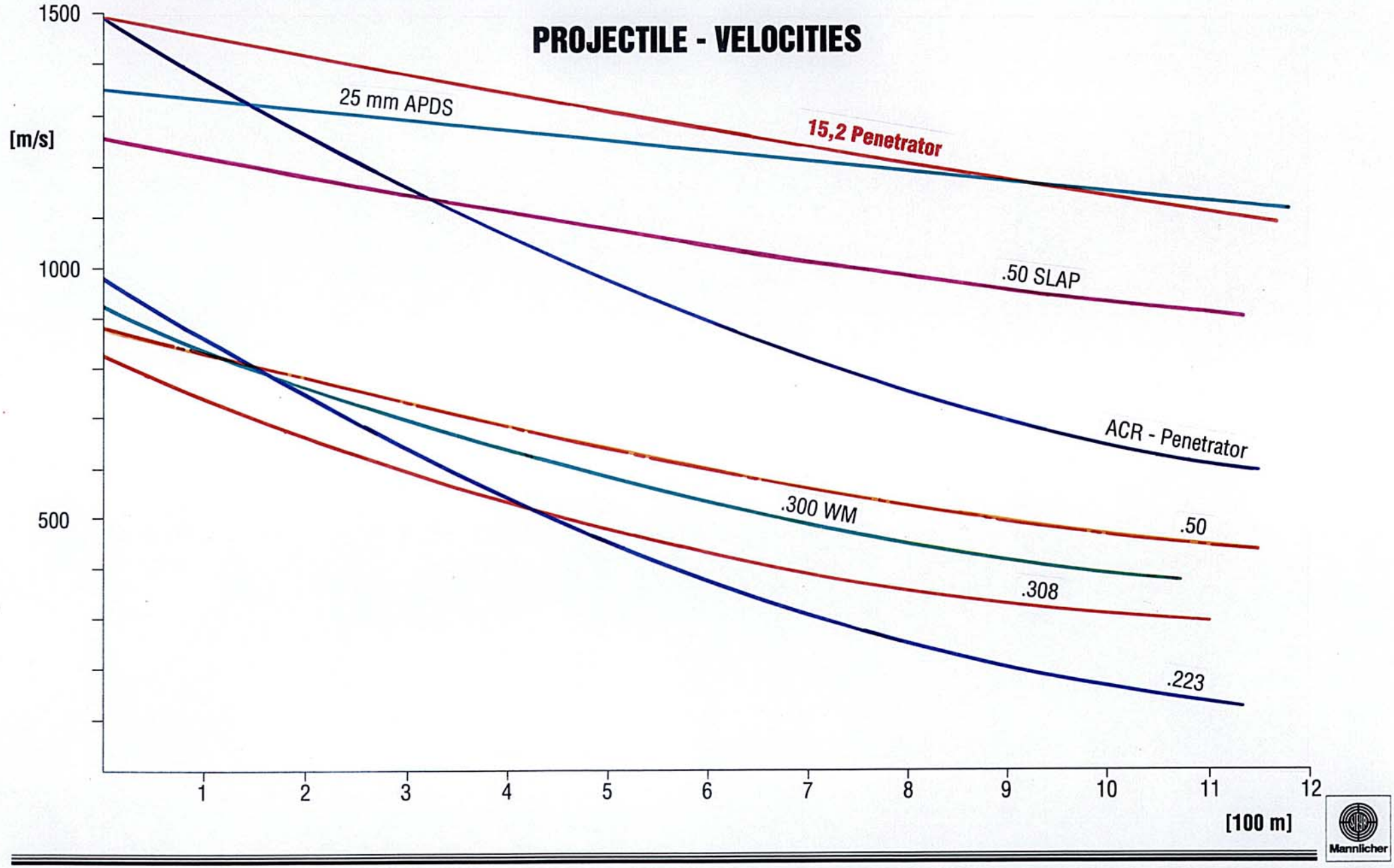
PROJECTILE - VELOCITIES
1500
1000
500
[m/s]
25 mm APDS
15,2 Penetrator
.50 SLAP
ACR - Penetrator
.300 WM
.50
.308
.223
1
2
3
4
5
6
7
8
9
10
11
12
[100 m]
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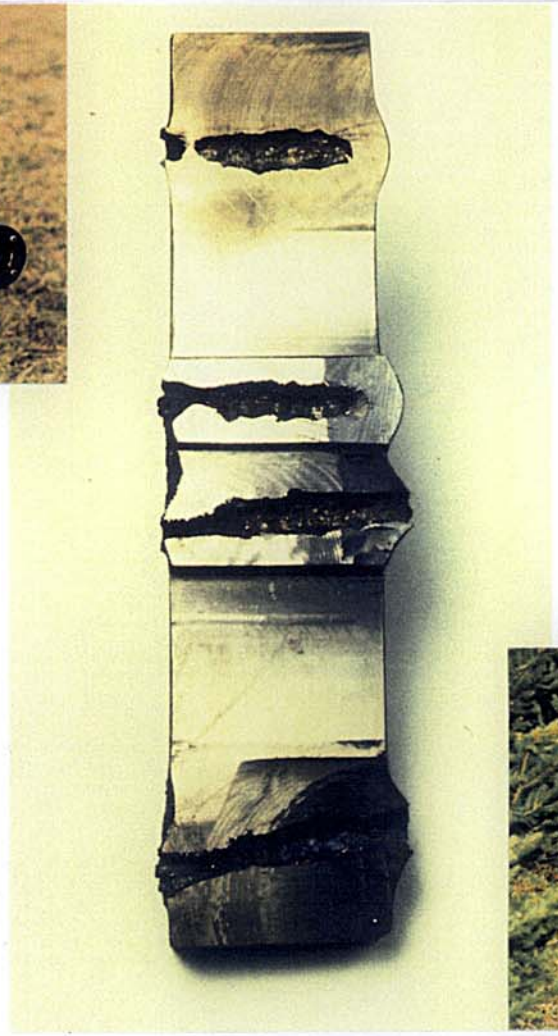
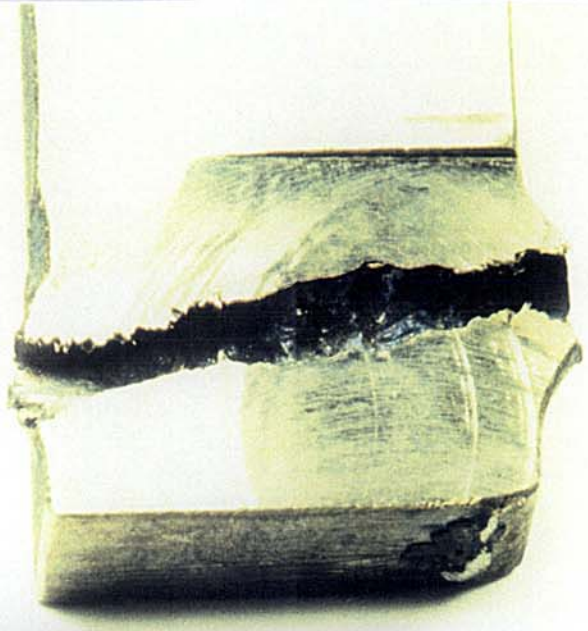
# TARGET EFFECTS





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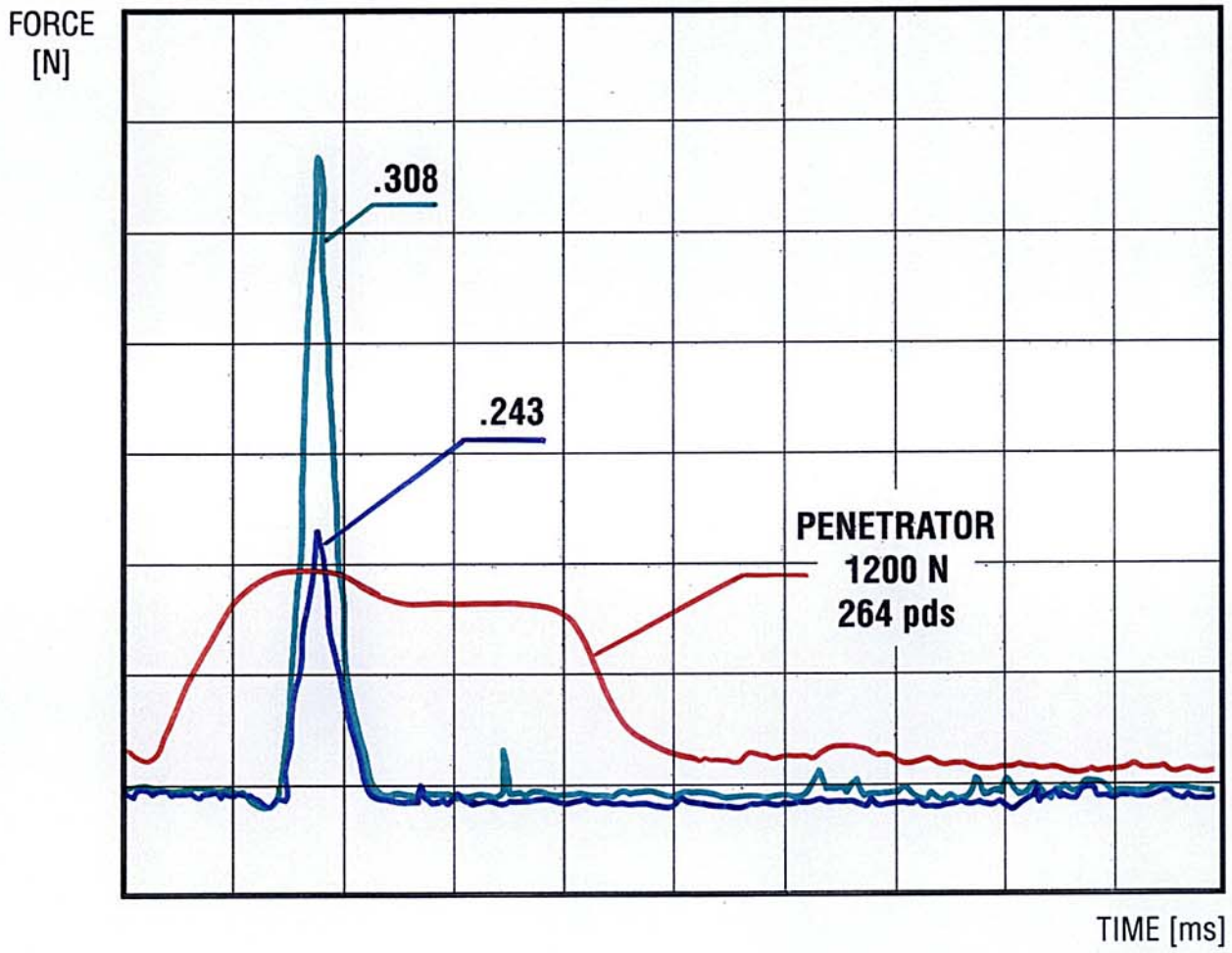
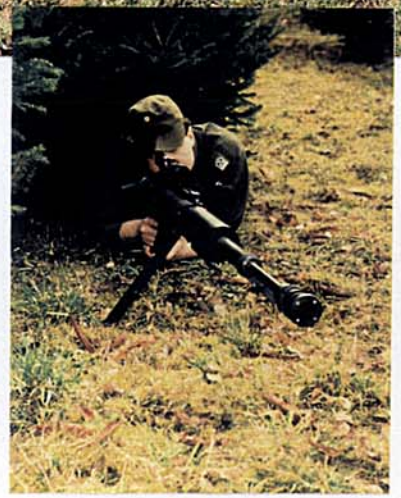
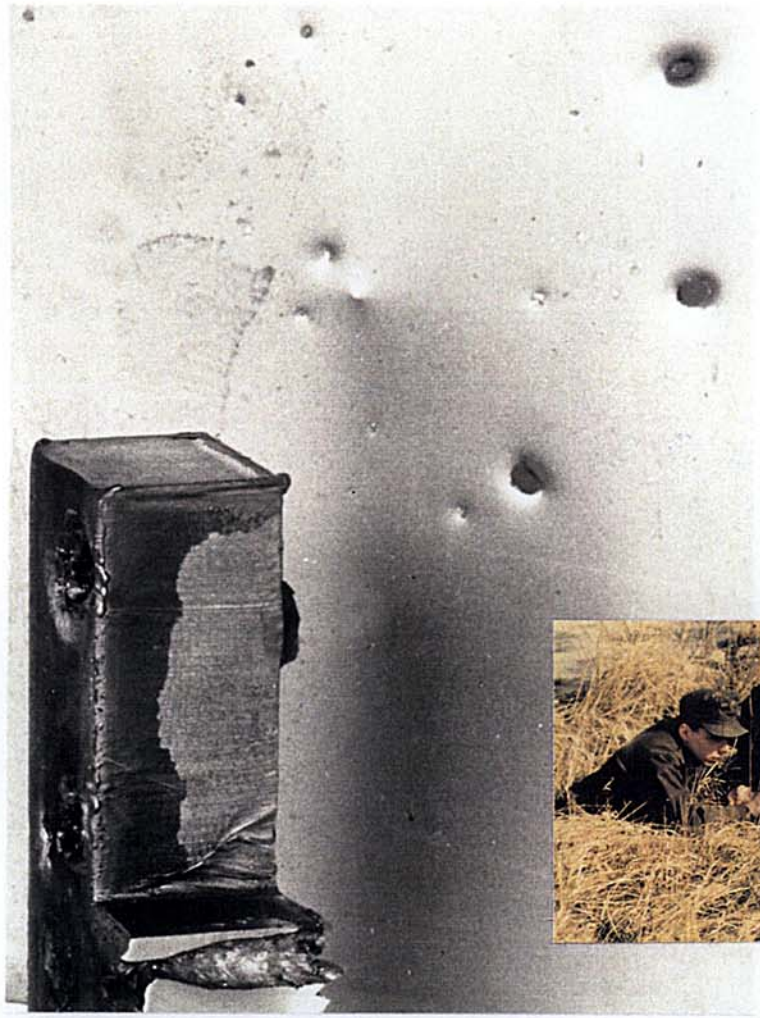
# RECOIL FORCE



# COMPARISON OF WEAPON SIZES



# TARGET EFFECTS



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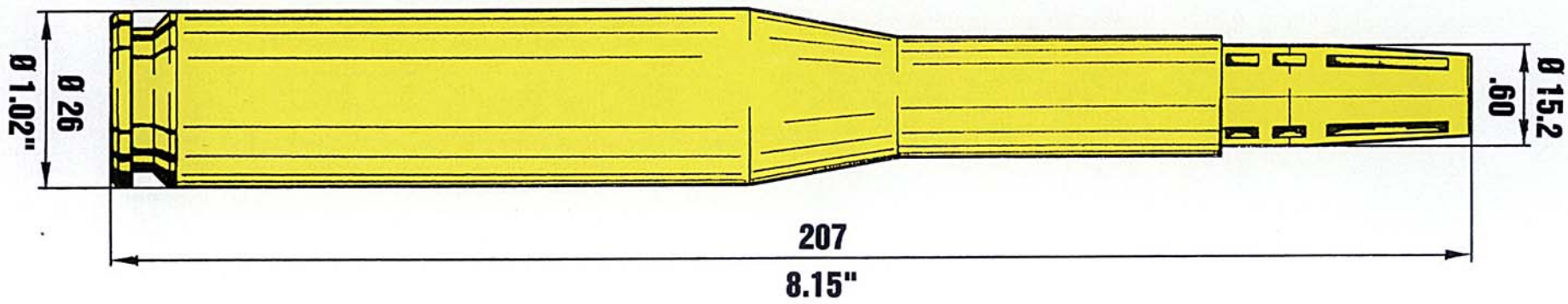
## DESCRIPTION OF THE AMMUNITION

# 15,2 mm / .60 APFSDS




# TECHNICAL DATA

| | | |
|---|---|---|
| WEIGHT OF ROUND | : | 150 g |
| TOTAL LENGTH | : | 207 mm |
| MAX. SHELL DIAMETER | : | 26 mm |
| WEIGHT OF PROJECTILE | : | 35 g / 20 g |
| MUZZLE VELOCITY $v_0$ | : | 1450 $\pm^{10}$ m/s |
| MAX. PRESSURE $p_{max}$ | : | 4800 $^{+200}$ bar |

Steyr Mannlicher